

Work Order ID 98911

\*98911\*

Page 1

March-28-13 10:42:56 AM

Item ID: 646.9711

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Blade

Start Date: 4/05/13

Start Qty: 80.00

\*80\*

Cust Item ID:

Required Date: 4/05/13

Req'd Qty: 80.00

\*80\*

Customer:

Reference:

Approvals:

Process Plan: ML5

Date: 13-04-01

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

\*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

\*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
|----------|--------------|

646.9700

N/C

0.00

100

\*100\*

BAND SAW

0.00

Bandsaw

Memo

Cut Blank at 4.625"

81

SL 13-04-01

110

\*110\*

HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

HAAS CNC vertical machine #1

Memo

1-Machine per folio FB135

DWG REV: N/C

FOLIO REV: AA

0.00

b.a 13|04|06

81

SL DAS  
08  
9-89

2- deburr and break all sharp edges except otherwise noted

NCR: Yes / No

## **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____<br>Part No. _____<br>NCR No. _____   |  |      |      | DISPOSITION  |  | AGAINST DEPARTMENT/PROCESS                       |  |                                 |              |   |  |   |
|--|--|------|------|--|--|--|--|---------------------------------|--------------|---|--|---|
|  |  |      |      | Rework<br>Scrap<br>Use-as-is<br>Work Order Update  | Skid-tube<br>Machining<br>Thermoforming<br>Large Fab | Crosstube<br>Small Fab<br>Finishing<br>Composite | Water Jet<br>Prod. Eng. Coor.<br>Rec/Store/Packaging<br>Supplier   | Engineering<br>Quality<br>Other |              |   |  |   |
| Root Cause   |  | Date | Step | Qty  | Description of work order update or Non-conformance  | Initial Chief Eng                                | Action Description   | Sign & Date                     | Verification | QC Inspector  |  |   |
| Doc/Data   |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Equip/Tooling  |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Operator   |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Material   |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Setup  |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Other  |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Process  |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Supplier   |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Training   |  |      |      |  |  |  |  |                                 |              |   |  |   |
| Unapproved   |  |      |      |  |  |  |  |                                 |              |   |  |   |
| FAULT CATEGORY   |  |      |      |  |  |  |  |                                 |              |   |  |   |
| <b>Landing Gear</b><br>Bending<br>Centre Not Concentric to O/S<br>Cracks<br>Crushed/Crimped<br>Cuffs<br>Heat Treat<br>Inspection Strip in Tube<br>Ripples in Bend<br>Torque Waves in Extrusion<br>Turning Sequence<br>Wave/Twist in Tube |  |      |      | <b>General</b><br>Bend<br>BOM/Route<br>Broken/Damaged<br>Burrs<br>Contamination<br>Countersink<br>Cut Too Short<br>Drill Holes<br>Drawing<br>Finish<br>Folio |  |  | Grain<br>Hardware<br>Inspection Incomplete<br>Instructions Incomplete/Unclear<br>Maintenance<br>Mislabeled<br>Misread<br>Offset<br>Out of Calibration<br>Out of Sequence<br>Outside Dimensions |                                 |              | Ovalized<br>Over/Under tolerance<br>Part Incorrect<br>Part Lost/Missing<br>Part Moved<br>Positioned Wrong<br>Power Loss/Surge |  | Pressure/Forced<br>Temperature/Cure<br>Weld<br>Wrong Stock Pulled |
|  |  |      |      |  |  |  |  |                                 |              |   |  | Other   |

**Work Order ID** 98911

**\*98911\***

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March-28-13 10:42:56 AM

**Item ID:** 646.9711

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

**Revision ID:**

Stop

**\*NS2\***

**Item Name:** Blade

**Start Date:** 4/05/13

**Start Qty:** 80.00

**\*80\***

**Cust Item ID:**

**Required Date:** 4/05/13

**Req'd Qty:** 80.00

**\*80\***

**Customer:**

**Reference:**

**Approvals:**

**Process Plan:**

**Date:**

**Tooling:**

**Date:**

Run

Start

**\*NR1\***

**QC:**

**Date:**

**SPC (Y/N):**

**Date:**

Stop

**\*NR2\***

**Sequence ID/  
Work Center ID**

**Operation  
Description**

**Set Up/  
Run Hours**

**Tool ID**

**Tool #**

**Plan  
Code**

**Accept  
Qty**

**Reject  
Qty**

**Reject  
Number**

**Insp.  
Stamp**

120

QC2- Inspect parts off machine FAI/FAIB

0.00

81 0

SL 13-4-4

**\*120\***

QC

Quality Control

130

QC8- Inspect parts - second check

0.00

CK 13/04/10

81 0

**\*130\***

QC

Quality Control

140

Outsource process - Heat Treat

0.00

CK 13/04/12 81

**\*140\***

Outsource

Outsource process - Heat Treat

Memo

0.00

HEAT TREAT AS PER DWG, SEE NOTE #3

ISSUE P/O: 19576

NCR: Yes / No

# **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Date:

**QA Closed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

| Work Order: _____            |      |                |     | DISPOSITION   |  | AGAINST DEPARTMENT/PROCESS   |  |   |              |  |  |
|------------------------------|------|----------------|-----|---|--|--|--|---|--------------|--|--|
|                              |      |                |     | Rework<br><input type="checkbox"/><br>Scrap<br><input type="checkbox"/><br>Use-as-is<br><input type="checkbox"/><br>Work Order Update<br><input type="checkbox"/> | Skid-tube<br><input type="checkbox"/><br>Machining<br><input type="checkbox"/><br>Thermoforming<br><input type="checkbox"/><br>Large Fab<br><input type="checkbox"/> | Crosstube<br><input type="checkbox"/><br>Small Fab<br><input type="checkbox"/><br>Finishing<br><input type="checkbox"/><br>Composite<br><input type="checkbox"/> | Water Jet<br><input type="checkbox"/><br>Prod. Eng. Coor.<br><input type="checkbox"/><br>Rec/Store/Packaging<br><input type="checkbox"/><br>Supplier<br><input type="checkbox"/> | Engineering<br><input type="checkbox"/><br>Quality<br><input type="checkbox"/><br>Other<br><input type="checkbox"/> |              |  |  |
| Part No. _____               |      |                |     |   |  |  |  |   |              |  |  |
| NCR No. _____                |      |                |     |   |  |  |  |   |              |  |  |
| Root Cause                   | Date | Step           | Qty | Description of work order update or Non-conformance   | Initial Chief Eng  | Action Description   | Sign & Date  | Verification  | QC Inspector |  |  |
| Doc/Data                     |      |                |     |   |  |  |  |   |              |  |  |
| Equip/Tooling                |      |                |     |   |  |  |  |   |              |  |  |
| Operator                     |      |                |     |   |  |  |  |   |              |  |  |
| Material                     |      |                |     |   |  |  |  |   |              |  |  |
| Setup                        |      |                |     |   |  |  |  |   |              |  |  |
| Other                        |      |                |     |   |  |  |  |   |              |  |  |
| Process                      |      |                |     |   |  |  |  |   |              |  |  |
| Supplier                     |      |                |     |   |  |  |  |   |              |  |  |
| Training                     |      |                |     |   |  |  |  |   |              |  |  |
| Unapproved                   |      |                |     |   |  |  |  |   |              |  |  |
| FAULT CATEGORY               |      |                |     |   |  |  |  |   |              |  |  |
| Landing Gear                 |      |                |     | General   |  |  |  |   |              |  |  |
| Bending                      |      | Bend           |     | Grain   |  | Ovalized   |  | Pressure/Forced   |              |  |  |
| Centre Not Concentric to O/S |      | BOM/Route      |     | Hardware  |  | Over/Under tolerance   |  | Temperature/Cure  |              |  |  |
| Cracks                       |      | Broken/Damaged |     | Inspection Incomplete   |  | Part Incorrect   |  | Weld  |              |  |  |
| Crushed/Crimped              |      | Burrs          |     | Instructions Incomplete/Unclear   |  | Part Lost/Missing  |  | Wrong Stock Pulled  |              |  |  |
| Cuffs                        |      | Contamination  |     | Maintenance   |  | Part Moved   |  |   |              |  |  |
| Heat Treat                   |      | Countersink    |     | Mislabeled  |  | Positioned Wrong   |  |   |              |  |  |
| Inspection Strip in Tube     |      | Cut Too Short  |     | Misread   |  | Power Loss/Surge   |  |   |              |  |  |
| Ripples in Bend              |      | Drill Holes    |     | Offset  |  |  |  |   |              |  |  |
| Torque Waves in Extrusion    |      | Drawing        |     | Out of Calibration  |  |  |  |   |              |  |  |
| Turning Sequence             |      | Finish         |     | Out of Sequence   |  |  |  |   |              |  |  |
| Wave/Twist in Tube           |      | Folio          |     | Outside Dimensions  |  |  |  |   |              |  |  |

Work Order ID 98911

March-28-13 10:42:56 AM

\*98911\*

Page 3

Item ID: 646.9711

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Blade

Start Date: 4/05/13

Start Qty: 80.00

\*80\*

Cust Item ID:

Required Date: 4/05/13

Req'd Qty: 80.00

\*80\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run

Start

\*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

Receive & Inspect for Damage & Mat'l Certs

0.00

\*150\*

Packaging

Packaging

155

QC5- Inspect part completeness to step on W/O

0.00

DAS  
21  
88

81

\*155\*

QC

Quality Control

0.00

13-204

Can

160

Spray Painting per QSI005 4.2

0.00

\*160\*

SprayPaint

Spray Painting

0.00

Memo PRIME AS PER DWG, SEE NOTE #4

PRIMER BATCH: 125452

81 0 0 Ad  
13-5-11

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____            |                          | <b>DISPOSITION</b> |                          |   | <b>AGAINST DEPARTMENT/PROCESS</b> |                    |                          |                     |                          |                 |                          |
|------------------------------|--------------------------|--------------------|--------------------------|---|-----------------------------------|--------------------|--------------------------|---------------------|--------------------------|-----------------|--------------------------|
|                              |                          | Rework             | <input type="checkbox"/> | Skid-tube   | <input type="checkbox"/>          | Crosstube          | <input type="checkbox"/> | Water Jet           | <input type="checkbox"/> | Engineering     | <input type="checkbox"/> |
|                              |                          | Scrap              | <input type="checkbox"/> | Machining   | <input type="checkbox"/>          | Small Fab          | <input type="checkbox"/> | Prod. Eng. Coor.    | <input type="checkbox"/> | Quality         | <input type="checkbox"/> |
|                              |                          | Use-as-is          | <input type="checkbox"/> | Thermoforming                                       | <input type="checkbox"/>          | Finishing          | <input type="checkbox"/> | Rec/Store/Packaging | <input type="checkbox"/> | Other           | <input type="checkbox"/> |
|                              |                          | Work Order Update  | <input type="checkbox"/> | Large Fab   | <input type="checkbox"/>          | Composite          | <input type="checkbox"/> | Supplier            | <input type="checkbox"/> |                 |                          |
| Root Cause                   | Date                     | Step               | Qty                      | Description of work order update or Non-conformance | Initial Chief Eng                 | Action Description | Sign & Date              | Verification        | QC Inspector             |                 |                          |
| Doc/Data                     |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Equip/Tooling                |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Operator                     |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Material                     |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Setup                        |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Other                        |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Process                      |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Supplier                     |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Training                     |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Unapproved                   |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| <b>FAULT CATEGORY</b>        |                          |                    |                          |   |                                   |                    |                          |                     |                          |                 |                          |
| Landing Gear                 |                          |                    |                          | General   |                                   |                    |                          |                     |                          |                 |                          |
|                              |                          |                    |                          | Bend  | <input type="checkbox"/>          | Grain              | <input type="checkbox"/> | Ovalized            | <input type="checkbox"/> | Pressure/Forced | <input type="checkbox"/> |
| Centre Not Concentric to O/S | <input type="checkbox"/> | BOM/Route          | <input type="checkbox"/> | Over/Under tolerance                                | <input type="checkbox"/>          | Temperature/Cure   | <input type="checkbox"/> |                     |                          |                 |                          |
| Cracks                       | <input type="checkbox"/> | Broken/Damaged     | <input type="checkbox"/> | Part Incorrect                                      | <input type="checkbox"/>          | Weld               | <input type="checkbox"/> |                     |                          |                 |                          |
| Crushed/Crimped              | <input type="checkbox"/> | Burrs              | <input type="checkbox"/> | Part Lost/Missing                                   | <input type="checkbox"/>          | Wrong Stock Pulled | <input type="checkbox"/> |                     |                          |                 |                          |
| Cuffs                        | <input type="checkbox"/> | Contamination      | <input type="checkbox"/> | Part Moved  | <input type="checkbox"/>          |                    | <input type="checkbox"/> |                     |                          |                 |                          |
| Heat Treat                   | <input type="checkbox"/> | Countersink        | <input type="checkbox"/> | Positioned Wrong                                    | <input type="checkbox"/>          |                    | <input type="checkbox"/> |                     |                          |                 |                          |
| Inspection Strip in Tube     | <input type="checkbox"/> | Cut Too Short      | <input type="checkbox"/> | Power Loss/Surge                                    | <input type="checkbox"/>          |                    | <input type="checkbox"/> |                     |                          |                 |                          |
| Ripples in Bend              | <input type="checkbox"/> | Drill Holes        | <input type="checkbox"/> | Other   | <input type="checkbox"/>          |                    | <input type="checkbox"/> |                     |                          |                 |                          |
| Torque Waves in Extrusion    | <input type="checkbox"/> | Drawing            | <input type="checkbox"/> |   | <input type="checkbox"/>          |                    | <input type="checkbox"/> |                     |                          |                 |                          |
| Turning Sequence             | <input type="checkbox"/> | Finish             | <input type="checkbox"/> |   | <input type="checkbox"/>          |                    | <input type="checkbox"/> |                     |                          |                 |                          |
| Wave/Twist in Tube           | <input type="checkbox"/> | Folio              | <input type="checkbox"/> |   | <input type="checkbox"/>          |                    | <input type="checkbox"/> |                     |                          |                 |                          |

Work Order ID 98911

\*98911\*

Page 4

March-28-13 10:42:56 AM

Item ID: 646.9711

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Blade

Stop

\*NS2\*

Start Date: 4/05/13

Start Qty: 80.00

\*80\*

Cust Item ID:

Required Date: 4/05/13

Req'd Qty: 80.00

\*80\*

Customer:

Reference:

Approvals: Process Plan:

Date: Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date: SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

170

QC14- Inspect Spray Paint

0.00

\*170\*

QC

Quality Control

81

DAS  
05/13-05/15  
9-89

180

Identify as per dwg & Stock Location:

0.00

\*180\*

Packaging

Packaging

Memo

80537

0.00

13/5/13 81

190

QC21- Final Inspection - Work Order Release

0.00

\*190\*

QC

Quality Control

Memo

0.00

13/5/13 JJ

MLJ 13-05-17

NCR: Yes / No

## **WORK ORDER NON-COMPLIANCE / UPDATE**

DQA: Date:

QA Closed: Date:

| Work Order: _____            |      |      |     | DISPOSITION   |  | AGAINST DEPARTMENT/PROCESS   |  |   |              |  |  |
|------------------------------|------|------|-----|---|--|--|--|---|--------------|--|--|
|                              |      |      |     | Rework<br><input type="checkbox"/><br>Scrap<br><input type="checkbox"/><br>Use-as-is<br><input type="checkbox"/><br>Work Order Update<br><input type="checkbox"/> | Skid-tube<br><input type="checkbox"/><br>Machining<br><input type="checkbox"/><br>Thermoforming<br><input type="checkbox"/><br>Large Fab<br><input type="checkbox"/> | Crosstube<br><input type="checkbox"/><br>Small Fab<br><input type="checkbox"/><br>Finishing<br><input type="checkbox"/><br>Composite<br><input type="checkbox"/> | Water Jet<br><input type="checkbox"/><br>Prod. Eng. Coor.<br><input type="checkbox"/><br>Rec/Store/Packaging<br><input type="checkbox"/><br>Supplier<br><input type="checkbox"/> | Engineering<br><input type="checkbox"/><br>Quality<br><input type="checkbox"/><br>Other<br><input type="checkbox"/> |              |  |  |
| Part No. _____               |      |      |     |   |  |  |  |   |              |  |  |
| NCR No. _____                |      |      |     |   |  |  |  |   |              |  |  |
| Root Cause                   | Date | Step | Qty | Description of work order update or Non-conformance   | Initial Chief Eng  | Action Description   | Sign & Date  | Verification  | QC Inspector |  |  |
| Doc/Data                     |      |      |     |   |  |  |  |   |              |  |  |
| Equip/Tooling                |      |      |     |   |  |  |  |   |              |  |  |
| Operator                     |      |      |     |   |  |  |  |   |              |  |  |
| Material                     |      |      |     |   |  |  |  |   |              |  |  |
| Setup                        |      |      |     |   |  |  |  |   |              |  |  |
| Other                        |      |      |     |   |  |  |  |   |              |  |  |
| Process                      |      |      |     |   |  |  |  |   |              |  |  |
| Supplier                     |      |      |     |   |  |  |  |   |              |  |  |
| Training                     |      |      |     |   |  |  |  |   |              |  |  |
| Unapproved                   |      |      |     |   |  |  |  |   |              |  |  |
| FAULT CATEGORY               |      |      |     |   |  |  |  |   |              |  |  |
| Landing Gear                 |      |      |     | General   |  |  |  |   |              |  |  |
| Bending                      |      |      |     | Bend<br><input type="checkbox"/>  | Grain<br><input type="checkbox"/>  | Ovalized<br><input type="checkbox"/>   | Pressure/Forced<br><input type="checkbox"/>  |   |              |  |  |
| Centre Not Concentric to O/S |      |      |     | BOM/Route<br><input type="checkbox"/>   | Hardware<br><input type="checkbox"/>   | Over/Under tolerance<br><input type="checkbox"/>   | Temperature/Cure<br><input type="checkbox"/>   |   |              |  |  |
| Cracks                       |      |      |     | Broken/Damaged<br><input type="checkbox"/>  | Inspection Incomplete<br><input type="checkbox"/>  | Part Incorrect<br><input type="checkbox"/>   | Weld<br><input type="checkbox"/>   |   |              |  |  |
| Crushed/Crimped              |      |      |     | Burrs<br><input type="checkbox"/>   | Instructions Incomplete/Unclear<br><input type="checkbox"/>  | Part Lost/Missing<br><input type="checkbox"/>  | Wrong Stock Pulled<br><input type="checkbox"/>   |   |              |  |  |
| Cuffs                        |      |      |     | Contamination<br><input type="checkbox"/>   | Maintenance<br><input type="checkbox"/>  | Part Moved<br><input type="checkbox"/>   |  |   |              |  |  |
| Heat Treat                   |      |      |     | Countersink<br><input type="checkbox"/>   | Mislabeled<br><input type="checkbox"/>   | Positioned Wrong<br><input type="checkbox"/>   |  |   |              |  |  |
| Inspection Strip in Tube     |      |      |     | Cut Too Short<br><input type="checkbox"/>   | Misread<br><input type="checkbox"/>  | Power Loss/Surge<br><input type="checkbox"/>   |  |   |              |  |  |
| Ripples in Bend              |      |      |     | Drill Holes<br><input type="checkbox"/>   | Offset<br><input type="checkbox"/>   |  |  |   |              |  |  |
| Torque Waves in Extrusion    |      |      |     | Drawing<br><input type="checkbox"/>   | Out of Calibration<br><input type="checkbox"/>   |  |  |   |              |  |  |
| Turning Sequence             |      |      |     | Finish<br><input type="checkbox"/>  | Out of Sequence<br><input type="checkbox"/>  |  |  |   |              |  |  |
| Wave/Twist in Tube           |      |      |     | Folio<br><input type="checkbox"/>   | Outside Dimensions<br><input type="checkbox"/>   |  |  |   |              |  |  |
| Other                        |      |      |     |   |  |  |  |   |              |  |  |

**Picklist Print**

March-28-13 10:42:55 AM

Page 1

**Work Order ID:** 98911**Parent Item:** 646.9711**Parent Item Name:** Blade**Start Date:** 4/05/13**Required Date:** 4/05/13**Start Qty:** 80.00**Required Qty:** 80.00**Comments:** IPP REV:A NEW ISSUE 12/09/24 JFS VERIFY BY:DD

| <b>Component Item ID/<br/>Item Name</b> | <b>Replacement<br/>Item ID</b> | <b>Mfg/<br/>Purch</b> | <b>Bin<br/>Item</b> | <b>Primary<br/>Location</b> | <b>Last<br/>Location</b> | <b>Route<br/>Seq ID</b> | <b>Unit of<br/>Measure</b> | <b>Qty on<br/>Hand</b> | <b>Qty per Kit</b> | <b>Total<br/>Qty</b> | <b>Qty<br/>Issued</b> | <b>Date<br/>Issued</b> | <b>Status</b> |
|---|--------------------------------|-----------------------|---------------------|-----------------------------|--------------------------|-------------------------|----------------------------|------------------------|--------------------|----------------------|-----------------------|------------------------|---------------|
| MSTEEL-A2-B0.500X1.250                  |                                | Purchased             | No                  |                             |                          | 100                     | f                          | 53.1977                | 0.386              | 32.505264            |                       | 32-04-03               |               |

AISI A2 TOOL STEEL BAR, 0.500 X 1.250

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| MAT009          | 53.1976578     |                 |
| 123250          | 3.0209578      |                 |
| 123763          | 50.1767        | 33.0            |

NCR: Yes / No

# **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Date:

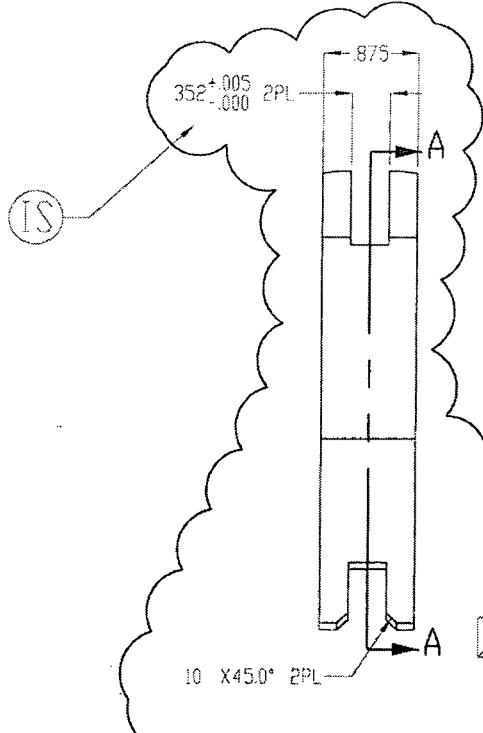
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____            |      |      |     | DISPOSITION   |  | AGAINST DEPARTMENT/PROCESS                    |  |                                      |              |  |  |
|------------------------------|------|------|-----|---|--|---|--|--------------------------------------|--------------|--|--|
|                              |      |      |     | Rework <input type="checkbox"/>                     | Skid-tube <input type="checkbox"/>                       | Crosstube <input type="checkbox"/>            | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |              |  |  |
|                              |      |      |     | Scrap <input type="checkbox"/>                      | Machining <input type="checkbox"/>                       | Small Fab <input type="checkbox"/>            | Prod. Eng. Coor. <input type="checkbox"/>    | Quality <input type="checkbox"/>     |              |  |  |
|                              |      |      |     | Use-as-is <input type="checkbox"/>                  | Thermoforming <input type="checkbox"/>                   | Finishing <input type="checkbox"/>            | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |              |  |  |
|                              |      |      |     | Work Order Update <input type="checkbox"/>          | Large Fab <input type="checkbox"/>                       | Composite <input type="checkbox"/>            | Supplier <input type="checkbox"/>            |                                      |              |  |  |
| Root Cause                   | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng  | Action Description                            | Sign & Date                                  | Verification                         | QC Inspector |  |  |
| Doc/Data                     |      |      |     |   |  |   |  |                                      |              |  |  |
| Equip/Tooling                |      |      |     |   |  |   |  |                                      |              |  |  |
| Operator                     |      |      |     |   |  |   |  |                                      |              |  |  |
| Material                     |      |      |     |   |  |   |  |                                      |              |  |  |
| Setup                        |      |      |     |   |  |   |  |                                      |              |  |  |
| Other                        |      |      |     |   |  |   |  |                                      |              |  |  |
| Process                      |      |      |     |   |  |   |  |                                      |              |  |  |
| Supplier                     |      |      |     |   |  |   |  |                                      |              |  |  |
| Training                     |      |      |     |   |  |   |  |                                      |              |  |  |
| Unapproved                   |      |      |     |   |  |   |  |                                      |              |  |  |
| FAULT CATEGORY               |      |      |     |   |  |   |  |                                      |              |  |  |
| Landing Gear                 |      |      |     | General   |  |   |  |                                      |              |  |  |
| Bending                      |      |      |     | Bend <input type="checkbox"/>                       | Grain <input type="checkbox"/>                           | Ovalized <input type="checkbox"/>             | Pressure/Forced <input type="checkbox"/>     |                                      |              |  |  |
| Centre Not Concentric to O/S |      |      |     | BOM/Route <input type="checkbox"/>                  | Hardware <input type="checkbox"/>                        | Over/Under tolerance <input type="checkbox"/> | Temperature/Cure <input type="checkbox"/>    |                                      |              |  |  |
| Cracks                       |      |      |     | Broken/Damaged <input type="checkbox"/>             | Inspection Incomplete <input type="checkbox"/>           | Part Incorrect <input type="checkbox"/>       | Weld <input type="checkbox"/>                |                                      |              |  |  |
| Crushed/Crimped              |      |      |     | Burrs <input type="checkbox"/>                      | Instructions Incomplete/Unclear <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/>    | Wrong Stock Pulled <input type="checkbox"/>  |                                      |              |  |  |
| Cuffs                        |      |      |     | Contamination <input type="checkbox"/>              | Maintenance <input type="checkbox"/>                     | Part Moved <input type="checkbox"/>           |  |                                      |              |  |  |
| Heat Treat                   |      |      |     | Countersink <input type="checkbox"/>                | Mislabeled <input type="checkbox"/>                      | Positioned Wrong <input type="checkbox"/>     |  |                                      |              |  |  |
| Inspection Strip in Tube     |      |      |     | Cut Too Short <input type="checkbox"/>              | Misread <input type="checkbox"/>                         | Power Loss/Surge <input type="checkbox"/>     |  |                                      |              |  |  |
| Ripples in Bend              |      |      |     | Drill Holes <input type="checkbox"/>                | Offset <input type="checkbox"/>                          | Other <input type="checkbox"/>                |  |                                      |              |  |  |
| Torque Waves in Extrusion    |      |      |     | Drawing <input type="checkbox"/>                    | Out of Calibration <input type="checkbox"/>              |   |  |                                      |              |  |  |
| Turning Sequence             |      |      |     | Finish <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                 |   |  |                                      |              |  |  |
| Wave/Twist in Tube           |      |      |     | Folio <input type="checkbox"/>                      | Outside Dimensions <input type="checkbox"/>              |   |  |                                      |              |  |  |

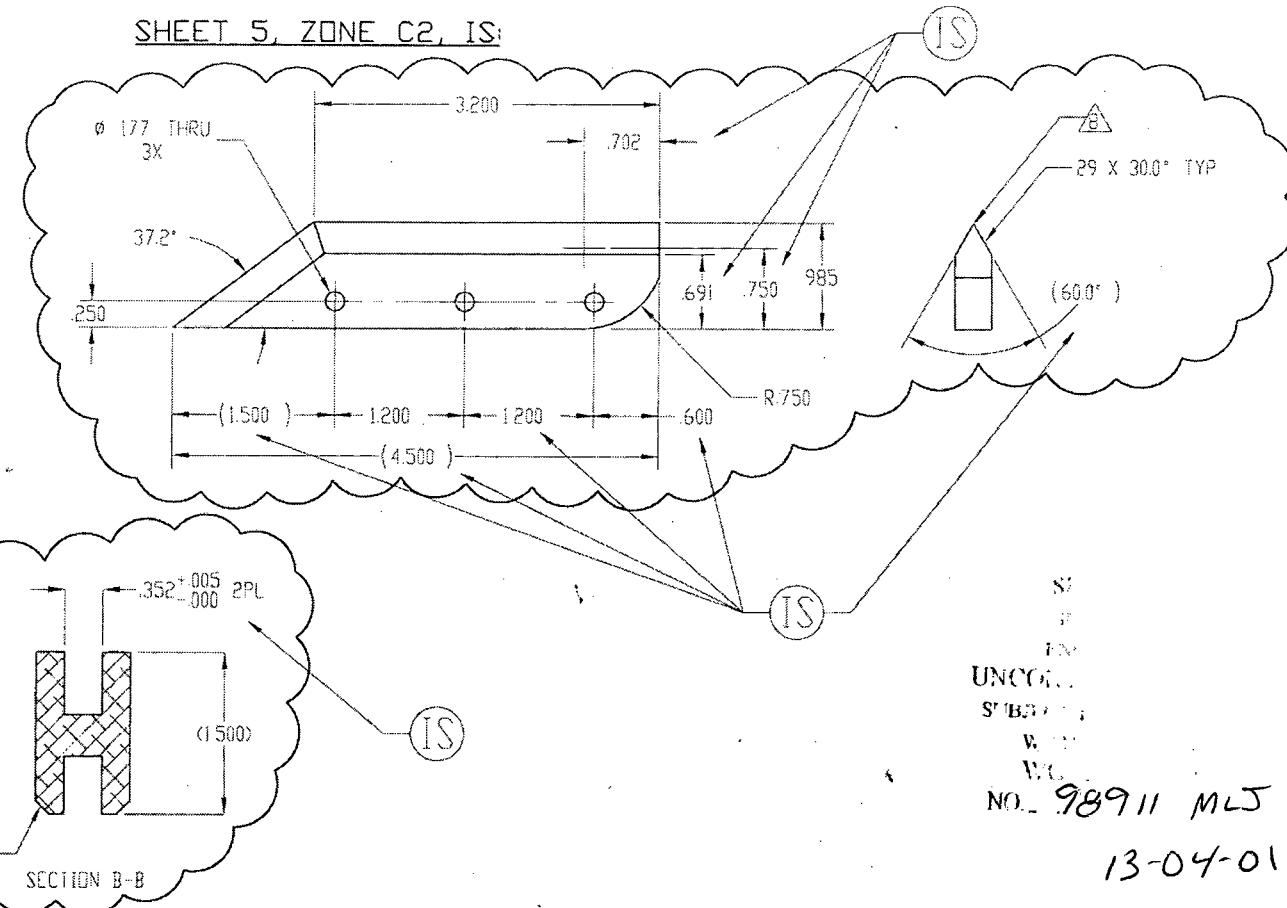
APICAL  
INDUSTRIES, INC.

|   |                     |                            |   |
|---|---------------------|----------------------------|---|
| ENGINEERING CHANGE NOTICE NO. 02744   |                     |                            | SHEET 1 OF 1  |
| DWG NO. 646.9700  | REV: N/C            | PREPARED BY S.HUFF         | EFFECT ON DWG<br><input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC. |
| DWG TITLE: CUTTER SUB ASSY  |                     |                            |   |
| APPROVED BY: ENGR <i>P. Bane</i>  | MFG <i>Janet J.</i> | QC <i>Wendy L. Johnson</i> | EFF: NEXT ORDER   |
| TRANSACTION CODES (TC):<br>A-ADD C-CREATE<br>R-REVISE D-DELETE              |                     |                            |   |
| REASON: REVISED SCREW LENGTH, CHANNEL WIDTHS & DIMENSIONING SCHEME SHEET 5. |                     |                            |   |

SHEET 2, ZONE C6, IS:



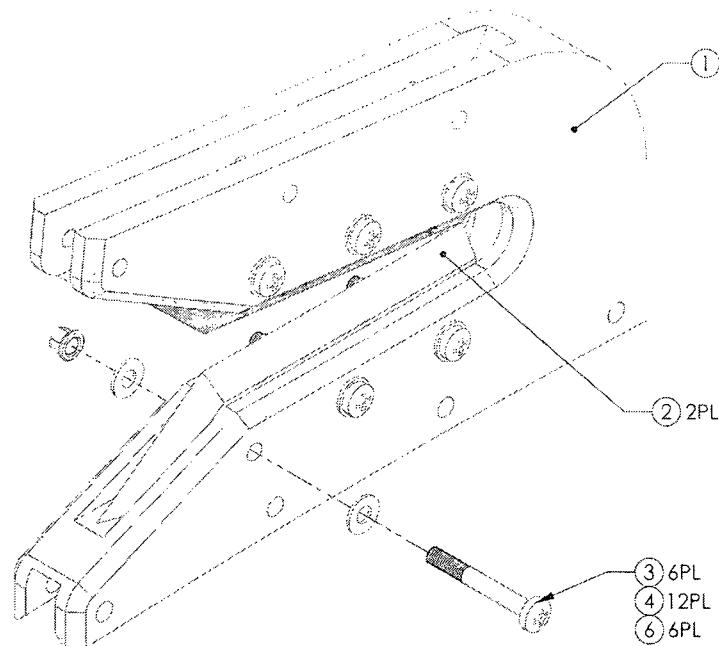
SHEET 5, ZONE C2, IS:



UNCON.  
S'BB  
W.C.  
W.C.  
NO. 98911 MLJ  
13-04-01

|                     |    |             |     |             |       |  |  |  |
|---------------------|----|-------------|-----|-------------|-------|--|--|--|
| 3                   | R  | 601.3157    |     | 12          | SCREW | MS27039-0818   |  |  |
|                     |    |             |     | .9701       |       |  |  |  |
| F/N                 | TC | PART NUMBER | QTY | DESCRIPTION |       | MATERIAL/SPECIFICATION   |  |  |
| DOCUMENTS EFFECTED: |    |             |     |             |       | CHANGE CATEGORY<br><input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input checked="" type="checkbox"/> ICA <input type="checkbox"/> FMS <input checked="" type="checkbox"/> BOM <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR |  |  |
|                     |    |             |     |             |       | DER REVIEW REQUIRED<br><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO   |  |  |

98911



646.9701

## NOTES:

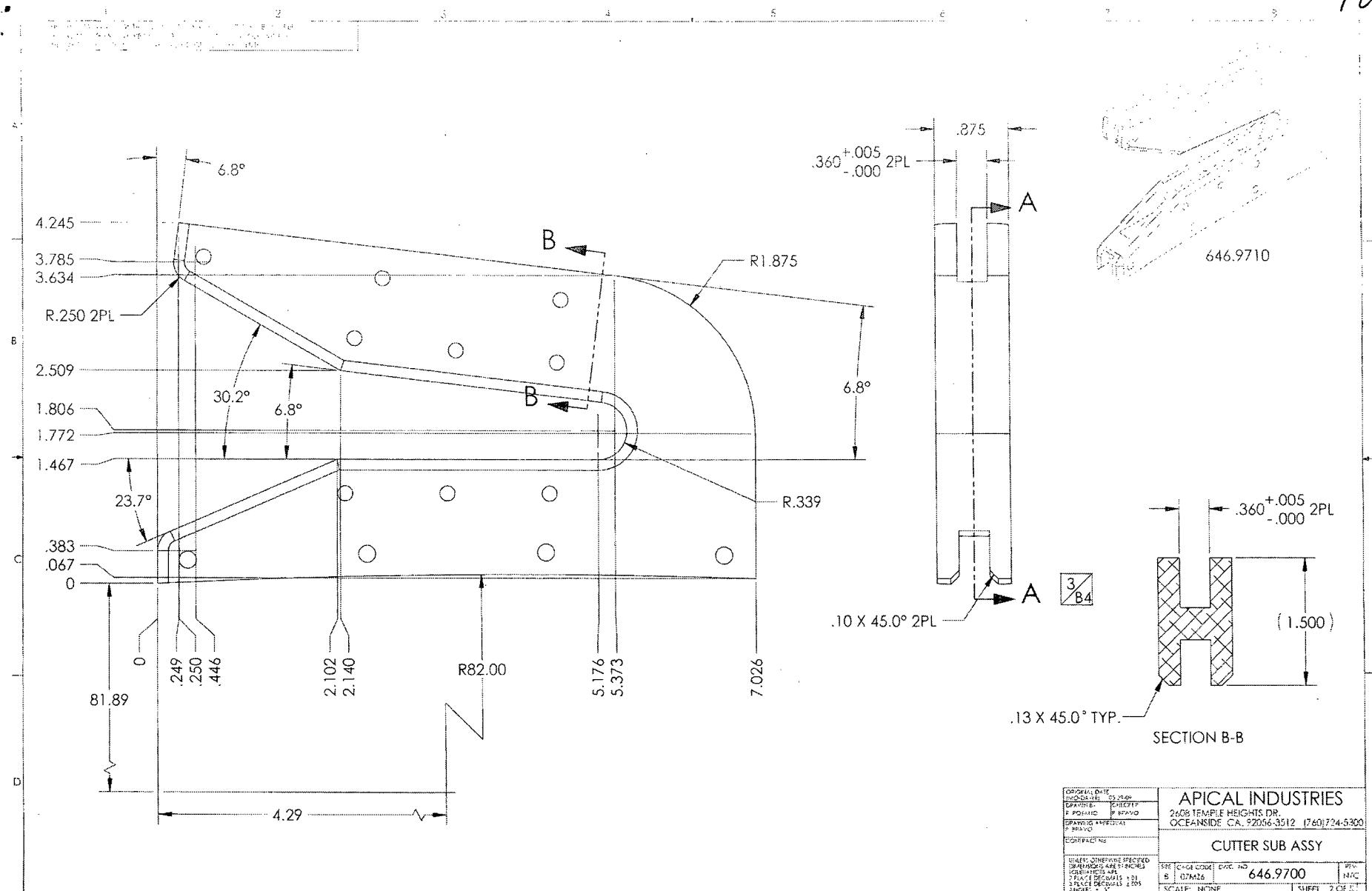
- 1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 3. MATERIAL: AISI A2 TOOL STEEL CONDITION: ANNEALED POST PROCESS: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS
- 4. FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6. IDENTIFY IAW MPP-120
- 7. APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8. CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE

## UNINCORPORATED ECN(s)

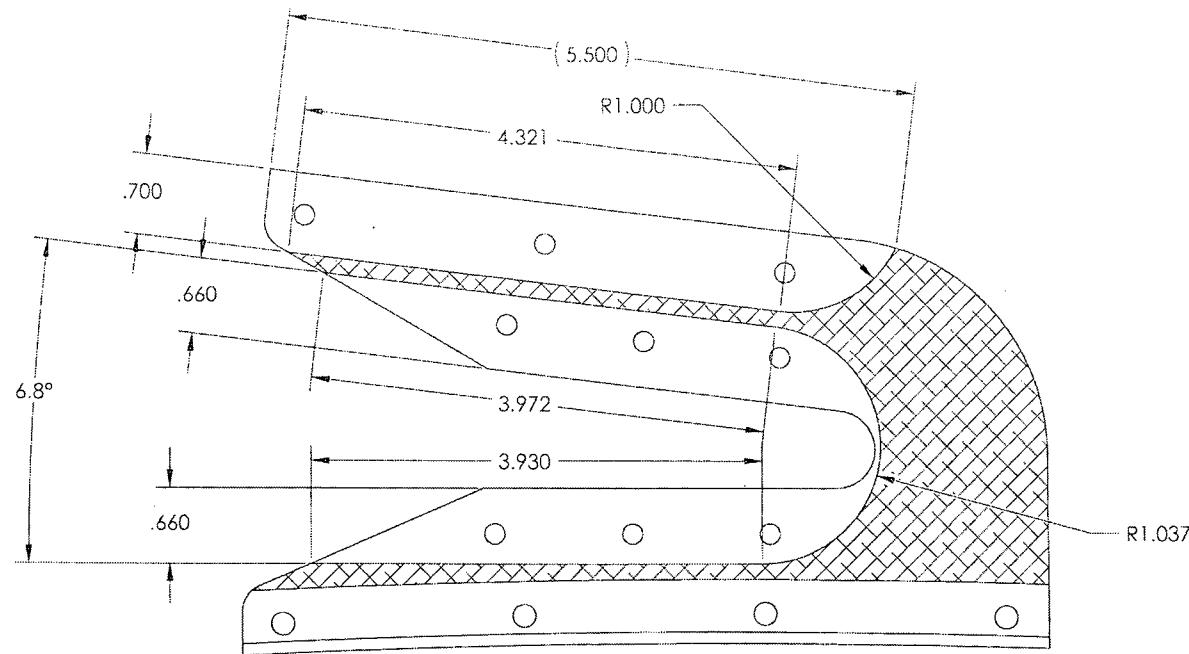
02744

|              | 6   | 6   | 601.1541                   | LOCKNUT         | MS21042A06   |
|--------------|---|---|----------------------------|-----------------|--------------|
| A/P          | 5   | 601.2045  | RTV, LOCTITE 598           |                 |              |
|              | 12  | 4   | 601.2764                   | WASHER          | MS111991B29  |
|              | 6   | 3   | 601.2765                   | SCREW           | MS2703P40819 |
|              | 2   | 2   | 646.9711                   | BLADE           |              |
|              | 1   | 1   | 646.9710                   | BODY            |              |
|              | 646.9701  |   |                            | CUTTER SUB ASSY |              |
| QTY          | FIND #  | PART #  | DESCRIPTION                | MATL            | SPEC.        |
|              |   |   | PARIS LIST                 |                 |              |
| NEXT ASSY(S) | OPENING DATE<br>REVISION DATE<br>DRAWN BY<br>P. POKORNÝ<br>S. VYKRAZ<br>APPROVED<br>E. K. KARL<br>CONTR. C. H. S. | APICAL INDUSTRIES<br>2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA. 92056-3512 (760)724-5300 |                            |                 |              |
| 646.9600     |   | (R)   |                            |                 |              |
|              |   |   | CUTTER SUB ASSY            |                 |              |
|              |   |   | SEE CHASSIS CODE: 646.9700 |                 |              |
|              |   |   | B C7M26                    |                 |              |
|              |   |   | SCALE: NONE                |                 |              |
|              |   |   | 1 SHEET                    |                 |              |
|              |   |   | 1 OF 5                     |                 |              |

98911



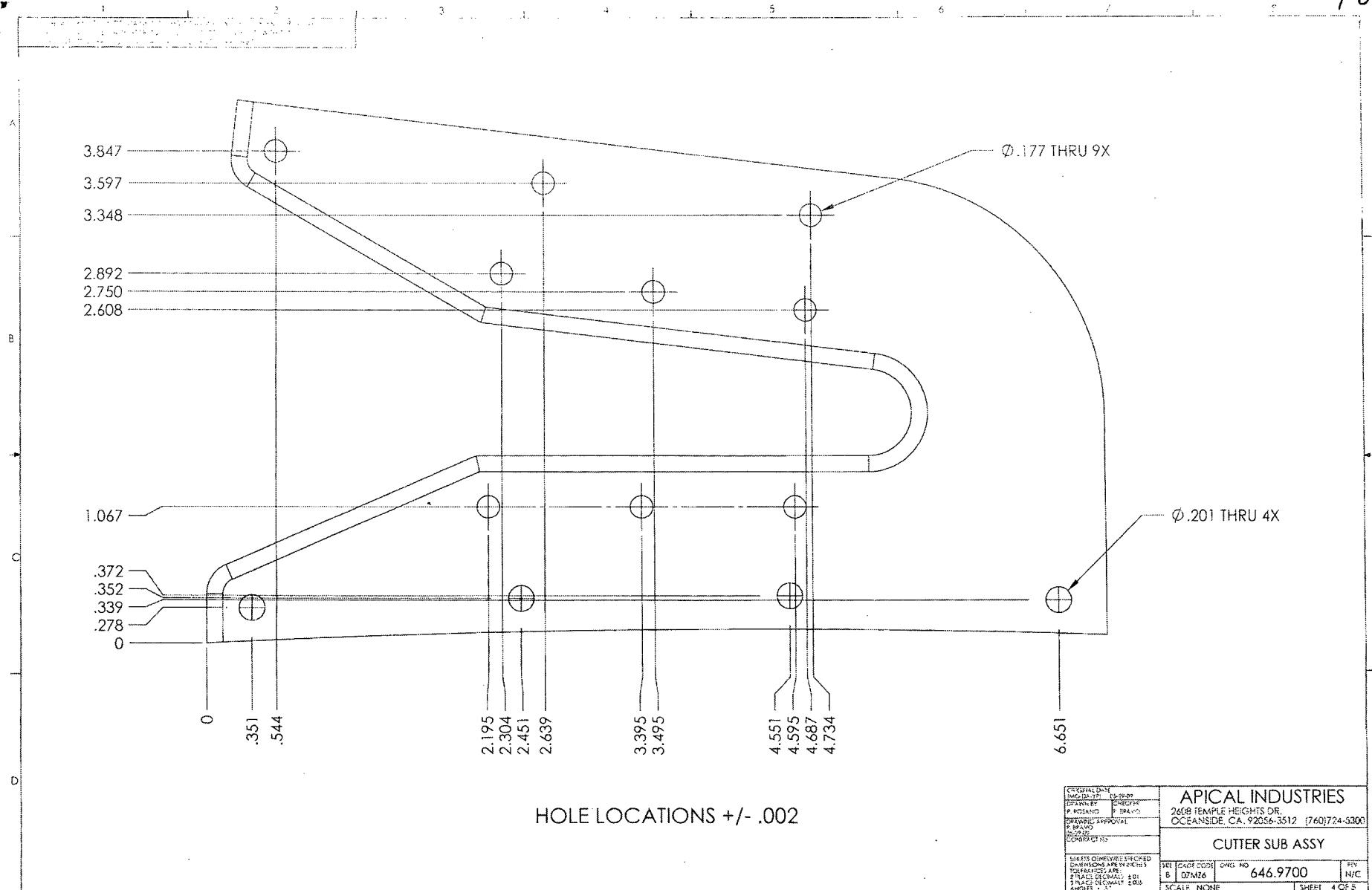
98911



SECTION A-A 2/C8

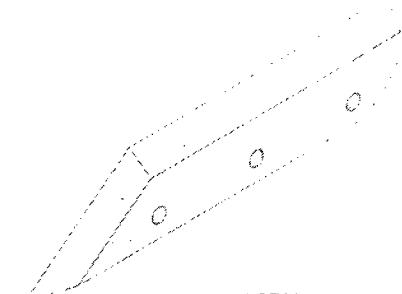
|   |                |                   |              |
|---|----------------|-------------------|--------------|
| ORIGINAL DATE   | REVISION DATE  | DESIGNER          | CHECKER      |
| 10/10/01  |                | E. ROSENHO        | P. BRAVO     |
| DRAWING APPROVAL  |                |                   |              |
| S. SAWYER<br>10/10/01   |                |                   |              |
| CONTRACT NO.  |                |                   |              |
| CUTTER SUB ASSY   |                |                   |              |
| UNLESS OTHERWISE SPECIFIED<br>CONNECTIONS ARE IN INCHES<br>TOLERANCES ARE AS PER:<br>1 PLACE DECIMALS ± .005<br>ANGLES ± 5° |                |                   |              |
| REV.<br>N/G   | DATE: 10/10/01 | ENG. NO. 646.9700 | PEM          |
| SCALE: NONE   | B DIN A4       |                   | SHEET 3 OF 5 |

98911

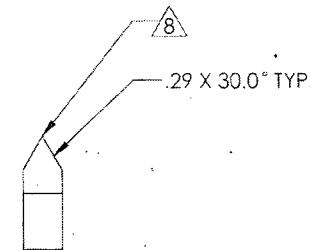
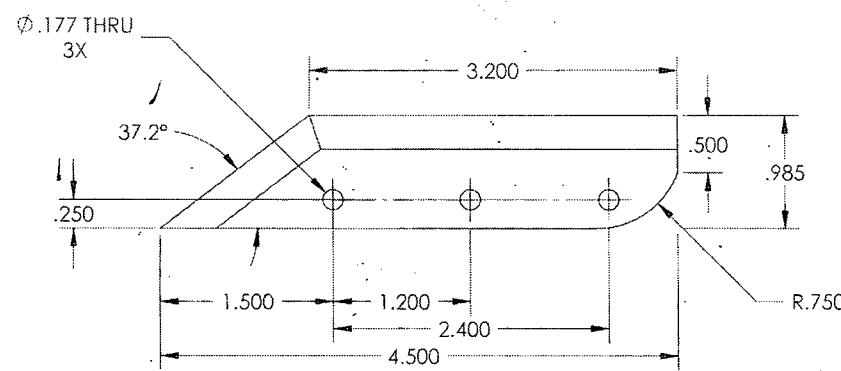


|  |                         |                       |
|--|-------------------------|-----------------------|
| DATE DRAWN: 05-26-02   | REVIEWED BY: P. RISLAND | APPROVED BY: P. BRAVO |
| DRAWING APPROVAL   |                         |                       |
| 05-26-02   |                         |                       |
| COMMENTS:  |                         |                       |
| SHEET ONE/ONE EIGHT<br>DIMENSIONS ARE IN INCHES<br>2 PLACES DECIMALS 2D<br>3 PLACES DECIMALS 2D<br>ANGLES 1' D |                         |                       |
| REV: B   | CAST CODE: 07M126       | ENG. NO: 646.9700     |
| SCALE: NONE  | P/N: N/C                |                       |
| SHEET 4 OF 5   |                         |                       |

98911



646.9711



|                    |   |  |  |
|--------------------|---|--|--|
| ORIGINATOR'S NAME: | APICAL INDUSTRIES   |  |  |
| DRWNR'S NAME:      | 2608 TEMPLE HEIGHTS DR.<br>OCEANSIDE, CA 92056-3512 (760)724-5300                           |  |  |
| DRWNR'S ADDRESS:   |   |  |  |
| DRWNR'S PHONE:     |   |  |  |
| COMPONENT:         | CUTTER SUB ASSY   |  |  |
| INSTRUMENTATION:   | NONE  |  |  |
| DATA SOURCE:       | DRAWN BY: P. SPAND<br>CHECKED BY: J. HARRIS<br>APRIL 1996<br>314-CE DEC-96 S-104<br>AMEND 5 |  |  |
| DATA CODE:         | B 07M26   |  |  |
| DATA REV:          | 646.9700  |  |  |
| SCALE:             | NONE  |  |  |
| SHEET:             | 5 OF 5  |  |  |

U.4%

|                                   |              |             |
|-----------------------------------|--------------|-------------|
| DART AEROSPACE LTD                | Work Order:  | 98911       |
| Description: blade                | Part Number: | 646-9411    |
| Inspection Dwg: 646-9405 Rev: NYC |              | Page 1 of 1 |

# FIRST ARTICLE INSPECTION CHECKLIST

|              |          |             |          |                       |  |
|--------------|----------|-------------|----------|-----------------------|--|
| Measured by: | SL       | Audited by: | Onf      | Preliminary Approval: |  |
| Date:        | 13-04-05 | Date:       | 13/04/10 | Date:                 |  |

| Rev | Date     | Change                     | Revised by | Approved |
|-----|----------|----------------------------|------------|----------|
| E   | 10.04.14 | Added preliminary approval | KJ         |          |

10.04.15



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO19576

Purchase Order Date 4/12/13  
PO Print Date 4/12/13

Page Number 1 of 1

Order From : VC-MET004

METCOR INC.  
560 BOUL. ARTHUR SAUVE  
SAINT-EUSTACHE, QC J7R 5A8  
CA

|                    |                 |                     |
|--------------------|-----------------|---------------------|
| Contact Name       | Buyer           | Chantal Lavoie      |
| Vendor Phone       | Requisition Nbr |                     |
| Vendor Fax         | Tax Resale Nbr  | 10127-2607          |
| Vendor Account Nbr | Terms           | Net 30              |
|                    | Currency        | CAD                 |
|                    | FOB             | Destination-Collect |

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

FAXED  
(413) 941-5

| Line Nbr | Reference<br>Revision ID | Description/<br>Mfg ID | Req Date/<br>Taxable | Req Qty/<br>Unit of Measure | Ship Method      | Unit Price | Extended<br>Price |
|----------|--------------------------|------------------------|----------------------|-----------------------------|------------------|------------|-------------------|
| 1        | 98911                    | 646.9711 BLADE         | 4/26/13              | 81.00<br>Yes                | FedEx PI collect | \$2.6000   | \$210.60          |

Special Inst: FINISH: HEAT TREAT TO 58-62 RC  
ROCKWELL HARDNESS

PART ARE MADE FROM AISI A2 TOOL  
STEEL

PLEASE NOTE: DETAIL C OC REQUIRED

PO Total: \$210.60

CERTIFICATE OF CONFORMITY  
REQ'D UPON DELIVERY

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required YES NO

Change Nbr: 1

Change Date: 4/12/13

# METCOR INC.

560 BOUL. ARTHUR-SAUVÉ  
ST-EUSTACHE, QC J7R 5A8  
Tel: 450-473-1884 / Fax: 450-491-5498

## Reçu de livraison

Delivery Receipt

| BON DE TRAVAIL | EXPÉDITEUR | BON D'EXPÉDITION |
|----------------|------------|------------------|
| Order          | Shipper ID | Shipper          |
| 185544         | 1          | 71033            |

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

### DART AEROSPACE

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
Ph: 613-632-5200  
Fax: 613-632-1053

### LIVRÉ À /Shipped To

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
Ph: 613-632-5200  
Fax: 613-632-1053

| COMMANDÉ DU CLIENT | BON DE LIVRAISON DU CLIENT | TYPE DE MATERIEL | DATE DE LA COMMANDE | TRANSPORTEUR |
|--------------------|----------------------------|------------------|---------------------|--------------|
| Customer PO        | Customer Shipper No.       | Material Type    | Order Date          | Carrier      |
| PO19576            |                            | A2               | 4/15/2013           | FEDEX        |

| QUANTITÉ | No. PIÈCE / NOM DE LA PIÈCE / DESCRIPTION DE LA PIÈCE | POIDS  |
|----------|---|--------|
| Quantity | Part No. Part Name Part Description                   | Weight |

1 646.9711 23,

(81) BLADE

MATERIAL: AISI A2 TOOL STEEL

CONTENANT: 1 BOÎTE DE CARTON

| TYPE DE CONTENEUR | # DE CONTENEURS | COMMENTAIRES CONTENEUR |
|-------------------|-----------------|------------------------|
| Container Type    | # Of Containers | Container Comments     |
| BOITE DE CARTON   | 1               |                        |

| CERTIFICAT | EMPAQUETAGE | QUANTITÉ EXPÉDIÉE / Quantity Shipped | POIDS EXPÉDIÉ / Weight Shipped |
|------------|-------------|--------------------------------------|--------------------------------|
|            | Packing     | 1                                    | 23,00                          |

| QUANTITÉ RESTANTE / Quantity Remaining | POIDS RESTANT / Weight Remaining |
|--|----------------------------------|
| 0                                      | 0,00                             |

| CERTIFICAT | QUANTITÉ EXPÉDIÉE /Quantity Shipped: | POIDS EXPÉDIÉ / Weight Shipped : |
|------------|--------------------------------------|----------------------------------|
|            | 1                                    | 23,00                            |

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

EXPÉDIÉ LE / Shipped On : 04/25/2013

560, boul. Arthur-Sauvé, St-Eustache (Québec) J7R 5A8

Tél. 450 473-1884

Télécopieur/Fax administration 450 491-5498

Télécopieur/Fax production 450 491-6454

**Certificat de Conformité**

Certificate of Compliance

| BON DE TRAVAIL<br>order | CHARGEMENT<br>load |
|-------------------------|--------------------|
| 185544                  | 1                  |

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

| COMMANDE DU CLIENT<br>customer po | BON DE LIVRAISON DU CLIENT<br>customer shipper no. | MATÉRIEL<br>material | CODE DE TRAITEMENT<br>mat'l heat code | NUMÉRO DE LOT<br>lot number |
|-----------------------------------|--|----------------------|---------------------------------------|-----------------------------|
| PO19576                           |  | A2                   |                                       |                             |

**SPÉCIFICATIONS DU PROCÉDÉ**

processing specifications

VAC HARDEN

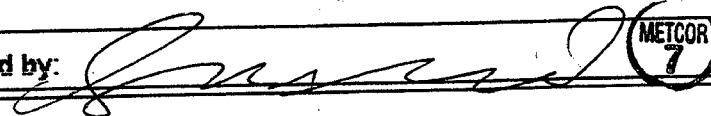
HARDEN AND TEMPER

| EXIGENCE / requirement | SPÉCIFICATIONS / specified | TESTS EXÉCUTÉS / performed | RÉSULTATS DE TESTS / results |
|------------------------|----------------------------|----------------------------|------------------------------|
| HARDNESS               | 58 - 62 HRC                | 5                          | 60.0 - 61.0 HRC              |

| QUANTITÉ<br>quantity | POIDS<br>weight | DESCRIPTION DES PIÈCES<br>parts description  |
|----------------------|-----------------|--|
| 1                    | 23              | 846.9711<br>(81) BLADE<br>MATERIAL: AISI A2 TOOL STEEL<br><br>CONTENANT: 1 BOÎTE DE CARTON |


**COMMENTAIRES / comments**

CERTIFIÉ par / Certified by:



METCOR

DATE: 2013-04-24

# METCOR INC.

560 BOUL. ARTHUR-SAUVÉ  
ST-EUSTACHE, QC, J7R 5A8

Tel: 450-473-1884 / Fax: 450-491-5498

## Certificat de Conformité Détailé

Detailed Certificate of Compliance

| BON DE TRAVAIL<br>order | CHARGEMENT<br>load |
|-------------------------|--------------------|
| 185544                  | 1                  |

CLIENT / customer 215

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY

1

ON K6A 1K7

| COMMANDE DU CLIENT<br>customer po                             | BON DE LIVRAISON DU CLIENT<br>customer shipper no.    | MATÉRIEL<br>material   | CODE DE TRAITEMENT<br>mat'l heat code | NUMÉRO DE LOT<br>lot number |
|---|---|--|---------------------------------------|-----------------------------|
| PO19576   |   | A2   |                                       |                             |
| <b>SPÉCIFICATIONS DU PROCÉDÉ</b><br>processing specifications |   |  |                                       |                             |
| VAC HARDEN  |   |  |                                       |                             |
| HARDEN AND TEMPER   |   |  |                                       |                             |
| EXIGENCE / requirement  | SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed | RÉSULTATS DE TESTS / results   |                                       |                             |
| HARDNESS  | 58 - 62 HRC   | 5  | 60.0 - 61.0 HRC                       |                             |
| QUANTITÉ<br>quantity  | POIDS<br>weight                                       | DESCRIPTION DES PIÈCES<br>parts description  |                                       |                             |
| 1   | 23  | 646.9711<br>(81) BLADE<br>MATERIAL: AISI A2 TOOL STEEL<br><br>CONTENANT: 1 BOÎTE DE CARTON |                                       |                             |

| Operation           | Temp. spécifiée<br>Specified Temp | Temps de trempe<br>Spécifié<br>Specified Soak<br>Temp | Atmosphere       | Carbone<br>Carbon<br>Potential | Q-Media<br>Q-Temp | Four #<br>Furnace # | Date Départ<br>Start Date | Heure d'entrée<br>Time In | Heure de sortie<br>Time Out | Date Complétée<br>Date complete |
|---------------------|-----------------------------------|---|------------------|--------------------------------|-------------------|---------------------|---------------------------|---------------------------|-----------------------------|---------------------------------|
| 1.00<br>CONT. INIT. | LAVAGE                            |   | si<br>nécessaire |                                |                   |                     |                           |                           |                             |                                 |
| 2.00<br>PREPARING   | COMPTAGE                          |   |                  |                                |                   |                     |                           |                           |                             |                                 |
| 3.00<br>PREHEAT 1   | 1200<br>+/-10                     | 0:30  | VAC              |                                |                   | 393                 |                           |                           |                             |                                 |
| 4.00<br>PREHEAT 2   | 1500<br>+/-10                     | 0:30  | VAC              |                                |                   | 393                 |                           |                           |                             |                                 |
| 5.00<br>VAC HARDE   | 1800<br>+/-10                     | 1 hrs 30<br>minutes                                   | VAC              |                                | AZOTE             | 393                 |                           |                           |                             |                                 |
| 6.00<br>TEMPER      | 400°F                             | 2 hrs   | air              |                                |                   | 655                 |                           |                           |                             |                                 |
| 7.00<br>TEMPER 2    | 400°F                             | 2 hrs   | air              |                                |                   | 655                 |                           |                           |                             |                                 |

# METCOR INC.

560 BOUL. ARTHUR-SAUVÉ  
ST-EUSTACHE, QC, J7R 5A8

Tel: 450-473-1884 / Fax: 450-491-5498

## Certificat de Conformité Détailé

Detailed Certificate of Compliance

| BON DE TRAVAIL<br>order | CHARGEMENT<br>load |
|-------------------------|--------------------|
| 185544                  | 1                  |

CLIENT / customer 215

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY

ON K6A 1K7

1

| Operation          | Temp. spécifiée<br>Specified Temp | Temps de trempe<br>Spécifié<br>Specified Soak<br>Temp | Atmosphere | Carbone<br>Carbon<br>Potential | Q-Media<br>Q-Temp | Four #<br>Furnace # | Date Départ<br>Start Date | Heure d'entrée<br>Time In | Heure de sortie<br>Time Out | Date Complétée<br>Date complete |
|--------------------|-----------------------------------|---|------------|--------------------------------|-------------------|---------------------|---------------------------|---------------------------|-----------------------------|---------------------------------|
| 8.00<br>HARDN INS  |                                   |   |            |                                |                   |                     |                           |                           |                             |                                 |
| 9.00<br>FINAL INSP |                                   |   |            |                                |                   |                     | 04-24-2013                |                           |                             | 04-24-2013                      |

### COMMENTAIRES / comments

Le traitement thermique a été fait en utilisant des équipements en conformité avec la spécification demandée. Toutes les opérations de traitement thermique ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandées ont été faites et documentés. Aucun changement ou dérogation n'a été faite par rapport au traitement thermique demandé. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

All the heat treatment processing performed on this order was accomplished using heat treatment equipment compliant with the requested heat treatment specification.

All the heat treatment operations were accomplished in accordance with the requested/required heat treatment specification and all required verifications test have been performed and documented.

No unauthorized changes or deviations to required heat treatment specifications or procedures have been performed. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

APPROUVE par / Approved by:

DATE: 2013-04-24



/ Nous certifions que toute l'information comprise sur ce rapport est exacte et conforme aux requis du client./We certify that all the information on this report is exact and in accordance with the order requirements.